July 20, 2020

Sonnet Biotherapeutics Announces Positive Preclinical Results from an Initial Efficacy Study Exploring the Combination of Granulocyte-Macrophage Colony-Stimulating Factor with Interleukins 18 and 12

- ***Data provide proof-of-concept for advancing SON-2014, a bispecific combination of GMcSF and IL-18***
- ***The company will further explore the utility of a bispecific combination of GMcSF and IL-12***

PRINCETON, NJ / ACCESSWIRE / July 20, 2020 /Sonnet BioTherapeutics Holdings, Inc., (NASDAQ:SONN) a clinical-stage company developing innovative targeted biologic drugs with enhanced mono or bispecific mechanisms, announced today that it has completed initial preclinical proof-of-concept work with both GMcSF and IL-18 and with GMcSF and IL-12 in a xenograft mouse model of melanoma. This study was designed to evaluate preclinical activity of the concomitantly administered cytokines as F_HAB-derived molecules, using Sonnet's Fully Human Albumin Binding (F_HAB) technology, in several groups of tumor-bearing mice. Sonnet's F_HAB-derived drug candidates all showed statistically significant reduction in tumor growth compared to placebo and when compared to cytokines not derived from the Company's platform.

The study included nine mice per active group and 12 mice in the placebo group. The Company administered a single dose as a conservative method for therapeutic lead selection. The table below summarizes the data after six days of administration of a single dose, in tumor bearing mice with an average initial cancer tumor volume of approximately 100 mm^3. *P* values were generated for between group comparisons (treatment vs placebo) of reduction in tumor growth.

Constructs - Day 6 Data	**Dose (µg)**	**Mean Tumor Volume, mm^3**	**STD**	***P* value***
Placebo	-	1136	278	

GMcSF	5	848	282	NS
GMcSF-F_HAB	1	739	236	0.0021
IL-18	5	665	187	<0.0001
IL18-F_HAB	1	480	179	<0.0001
GMcSF-F_HAB + IL12-F_HAB	1+1	435	108	<0.0001
GMcSF-F_HAB + IL18-F_HAB	2+2	678	176	<0.0001
* Using Tukey-Kramer HSD method				

The data indicate that GMcSF-F_HAB and IL18-F_HAB administered as monospecific formulations demonstrated improved anti-tumor activity (slower tumor progression) as compared with naked GMcSF or naked IL-18. In both comparisons, the F_HAB-derived molecules showed similar activity at one fifth the dose level as compared to naked, wild type cytokine. The Company also evaluated its IL12-F_HAB to investigate optimal synergies for future bispecific combinations. The data indicate that co-injection of GMcSF-F_HAB and IL12-F_HAB as monospecifics resulted in a strong synergistic reduction in tumor growth with just a single dose. Importantly, for all groups that received F_HAB-derived candidates, there was no weight loss observed, which potentially implies reduced toxicity relative to treatment with naked cytokine. Further animal studies are planned to optimize combinations for CMC development.

Pankaj Mohan, Ph.D., Founder and CEO, commented that, "We are very excited about these data, which suggest that GMcSF and IL-18 carry great promise as anti-cancer compounds, and encourage Sonnet's continued development of our bispecific candidate, SON-2014. This study also expands on the work we have done with SON-1010 and SON-1210 and augments our efforts to build a comprehensive immune oncology pipeline." He further commented that, "there is a level of consistency from our F_HAB platform showing higher activity at lower doses when compared to naked molecules. We believe that the key characteristic of our technology, which leads to the enhanced activity we are seeing, is the F_HAB's albumin binding for improved pK and tumor targeting."

John Cini, Ph.D., Co-Founder and CSO commented that, "I continue to be encouraged by these additional F_HAB platform data, which demonstrate a consistent ability to enhance

positive activity across all drug candidates tested thus far, including GMcSF and IL-18. GMcSF has been shown in the literature to have a significant impact on cancer cells by the local recruitment and activation of dendritic cells, resulting in the amelioration of tumor antigen-presentation to T cells. IL-18 has been shown in the literature to transport T cells from the lymphatic system to the tumor micro-environment, thereby promoting the transformation of a ‘cold tumor' into a 'hot tumor'."

About Sonnet BioTherapeutics, Inc.

Founded in 2011, Sonnet BioTherapeutics is an oncology-focused biotechnology company with a proprietary platform for innovating biologic drugs of single or bispecific action. Known as F_HAB (Fully Human Albumin Binding), the technology utilizes a fully human single chain antibody fragment (scFv) that binds to and "hitchhikes" on human serum albumin (HSA) for transport to target tissues. F_HAB is the foundation of a modular, plug-and-play construct for potentiating a range of large molecule therapeutic classes, including cytokines, peptides, antibodies and vaccines.

Sonnet Biotherapeutics Investor Contact
Alan Lada
Solebury Trout
617-221-8006
alada@soleburytrout.com

SOURCE: Sonnet BioTherapeutics, Inc.

View source version on accesswire.com:
https://www.accesswire.com/598073/Sonnet-Biotherapeutics-Announces-Positive-Preclinical-Results-from-an-Initial-Efficacy-Study-Exploring-the-Combination-of-Granulocyte-Macrophage-Colony-Stimulating-Factor-with-Interleukins-18-and-12